

ABSTRACT

Background and objectives:

Cardiovascular disease is an epidemic of modern society. Myocardial infarction is a major cause of morbidity and mortality in the world. Despite the impressive strides in diagnosis and management over the past four decades, acute myocardial infarction continues to be a major public health problem in industrialized world and is becoming an increasingly important problem in developing countries. In United States, 13 million individuals have ischemic heart disease,>6 million have angina pectoris,>7 million have persistent myocardial infarction.

The study “The platelet count and mean platelet volume and platelet distribution width in myocardial infarction “was done to assess the relationship between mean platelet volume (MPV) and the occurrence of acute myocardial infarction and to find out its association with the risk factors and short term prognosis after myocardial infarction.

Methods

With rigid criteria 65 patients were selected carefully and were evaluated on social, clinical and laboratory aspects after institutional ethical clearance with an informed consent.35 subjects were taken as

controls. The data were entered in Microsoft Excel spread sheet and analysed statistically.

Results

There were 45 males and 20 females in patient group. There were 25 males and 10 females in control group. The mean age of the patient group was 52.98 ± 15 and that of the control group 49.03 ± 10.36 (p value 0.167 –not statistically significant). The prevalence of smoking, systemic hypertension, and diabetes mellitus were noticed in both groups with statistical significance. The mean platelet count of the cases was 4.98 ± 0.23 lakhs/mm³ and that of the controls was 1.29 ± 0.42 Lakhs/mm³ (p value 0.050 statistically significant). The MPV of the cases ranged from 8.4 to 12 femtolitres with a mean of 10.2 ± 1.1 femtolitres. The MPV of the controls ranged from 7 to 10.60 femtolitres with mean of 8.29 ± 0.9 femtolitres. The difference between the two was statistically significant. (p value 0.001 significant).

Interpretation and conclusion

There was significantly relationship between age, sex, smoking, diabetes mellitus and systemic hypertension platelet count, MPV, PDW. MPV was found to be independent of aspirin intake. There was

correlation observed between MPV and short term prognosis like left ventricular dysfunction and death.

According to Assiri et al(2012) stated that platelet volume parameters mainly MPV and PDW are ,available and inexpensive markers ,detected significantly raised in patients admitted with acute coronary syndrome. From this observation, they suggested to use platelet parameters used to screen patients presenting to emergency room with chest pain suspected to have acute coronary syndrome.

Key words: Acute myocardial infarction, platelet count, mean platelet volume and platelet distribution width.